

## SEQUENCE LISTING

&lt;110&gt; Busfield et al.

&lt;120&gt; GLYCOPROTEIN VI AND USES THEREOF

&lt;130&gt; 7853-234

&lt;140&gt;

&lt;141&gt;

<150> 09/610,118  
<151> 2000-06-30<150> 09/503,387  
<151> 2000-02-14<150> 09/454,824  
<151> 1999-12-06<150> 09/345,468  
<151> 1999-06-30

&lt;160&gt; 78

&lt;170&gt; FastSEQ for Windows Version 3.0

<210> 1  
<211> 2047  
<212> DNA  
<213> Homo sapiens

&lt;400&gt; 1

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tacagggatg	aatatgtcaa	ttaccctgat	ttgatcatag	cacgttgat	acatgtactg	1920
caatattgt	gtccaccccc	taaatatgt	caattatgt	tacattttt	aaatcataaa	1980
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gagaaca						2047

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<400> 2

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gagaagccag	tgaccctccg	gtgccaggga	cctccggcg	tgacctgta	ccgcctggag	180
aagctgagtt	ccagcaggta	ccaggatcg	gcagtcctct	tcatccggc	catgaagaga	240
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gaccagctgg	agctcgttgc	cacgggagtt	tttgccaa	cctcgcttc	agcccagccc	360
ggcccgccgg	tgtcgtcagg	aggggacgta	accctacagt	gtcagactcg	gtatggcttt	420
gaccaattt	ctctgtacaa	ggaaggggac	cctgcggccct	acaagaatcc	cgagagatgg	480
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tacagcttct	ccagcaggga	cccatacctg	tggtcggccc	ccagcggaccc	cctggagctt	600
gtggtcacag	gaacctctgt	gaccccccagc	cggttaccaa	cagaaccacc	ttcctcggta	660
gcagaattct	cagaagccac	cgctgaactg	accgtctcat	tcacaaacaa	agtcttcaca	720
actgagact	ctaggagtt	caccaccagt	ccaaaggagt	cagactctcc	agctggctct	780
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aggggcaggg	ctgtcagag	gccgcttccg	cccctgcccgc	ccctccgc	gaccggaaa	960
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<210> 3  
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 <212> PRT  
 <213> Homo sapiens

<400> 3

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10															
15															
Arg	Val	Pro	Ala	Gln	Ser	Gly	Pro	Leu	Pro	Lys	Pro	Ser	Leu	Gln	Ala
20															
25															
30															
Leu	Pro	Ser	Ser	Leu	Val	Pro	Leu	Glu	Lys	Pro	Val	Thr	Leu	Arg	Cys
35															
40															
45															
Gln	Gly	Pro	Pro	Gly	Val	Asp	Leu	Tyr	Arg	Leu	Glu	Lys	Leu	Ser	Ser
50															
55															
60															
Ser	Arg	Tyr	Gln	Asp	Gln	Ala	Val	Leu	Phe	Ile	Pro	Ala	Met	Lys	Arg
65															
70															
75															
80															
Ser	Leu	Ala	Gly	Arg	Tyr	Arg	Cys	Ser	Tyr	Gln	Asn	Gly	Ser	Leu	Trp
85															
90															
95															
Ser	Leu	Pro	Ser	Asp	Gln	Leu	Glu	Leu	Val	Ala	Thr	Gly	Val	Phe	Ala
100															
105															
110															
Lys	Pro	Ser	Leu	Ser	Ala	Gln	Pro	Gly	Pro	Ala	Val	Ser	Ser	Gly	Gly
115															
120															
125															

Asp Val Thr Leu Gln Cys Gln Thr Arg Tyr Gly Phe Asp Gln Phe Ala  
 130 135 140  
 Leu Tyr Lys Glu Gly Asp Pro Ala Pro Tyr Lys Asn Pro Glu Arg Trp  
 145 150 155 160  
 Tyr Arg Ala Ser Phe Pro Ile Ile Thr Val Thr Ala Ala His Ser Gly  
 165 170 175  
 Thr Tyr Arg Cys Tyr Ser Phe Ser Ser Arg Asp Pro Tyr Leu Trp Ser  
 180 185 190  
 Ala Pro Ser Asp Pro Leu Glu Leu Val Val Thr Gly Thr Ser Val Thr  
 195 200 205  
 Pro Ser Arg Leu Pro Thr Glu Pro Pro Ser Ser Val Ala Glu Phe Ser  
 210 215 220  
 Glu Ala Thr Ala Glu Leu Thr Val Ser Phe Thr Asn Lys Val Phe Thr  
 225 230 235 240  
 Thr Glu Thr Ser Arg Ser Ile Thr Thr Ser Pro Lys Glu Ser Asp Ser  
 245 250 255  
 Pro Ala Gly Pro Ala Arg Gln Tyr Tyr Lys Gly Asn Leu Val Arg  
 260 265 270  
 Ile Cys Leu Gly Ala Val Ile Leu Ile Leu Ala Gly Phe Leu Ala  
 275 280 285  
 Glu Asp Trp His Ser Arg Arg Lys Arg Leu Arg His Arg Gly Arg Ala  
 290 295 300  
 Val Gln Arg Pro Leu Pro Pro Leu Pro Pro Leu Pro Gln Thr Arg Lys  
 305 310 315 320  
 Ser His Gly Gly Gln Asp Gly Gly Arg Gln Asp Val His Ser Arg Gly  
 325 330 335  
 Leu Cys Ser

<210> 4  
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 <212> PRT  
 <213> Homo sapiens

<400> 4  
 Met Ser Pro Ser Pro Thr Ala Leu Phe Cys Leu Gly Leu Cys Leu Gly  
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 Arg Val Pro Ala  
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<210> 5  
 <211> 319  
 <212> PRT  
 <213> Homo sapiens

<400> 5  
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 Leu Val Pro Leu Glu Lys Pro Val Thr Leu Arg Cys Gln Gly Pro Pro  
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 Gly Val Asp Leu Tyr Arg Leu Glu Lys Leu Ser Ser Ser Arg Tyr Gln  
 35 40 45  
 Asp Gln Ala Val Leu Phe Ile Pro Ala Met Lys Arg Ser Leu Ala Gly  
 50 55 60  
 Arg Tyr Arg Cys Ser Tyr Gln Asn Gly Ser Leu Trp Ser Leu Pro Ser  
 65 70 75 80  
 Asp Gln Leu Glu Leu Val Ala Thr Gly Val Phe Ala Lys Pro Ser Leu  
 85 90 95

Ser Ala Gln Pro Gly Pro Ala Val Ser Ser Gly Gly Asp Val Thr Leu  
                   100                  105                  110  
 Gln Cys Gln Thr Arg Tyr Gly Phe Asp Gln Phe Ala Leu Tyr Lys Glu  
                   115                  120                  125  
 Gly Asp Pro Ala Pro Tyr Lys Asn Pro Glu Arg Trp Tyr Arg Ala Ser  
                   130                  135                  140  
 Phe Pro Ile Ile Thr Val Thr Ala Ala His Ser Gly Thr Tyr Arg Cys  
                   145                  150                  155                  160  
 Tyr Ser Phe Ser Ser Arg Asp Pro Tyr Leu Trp Ser Ala Pro Ser Asp  
                   165                  170                  175  
 Pro Leu Glu Leu Val Val Thr Gly Thr Ser Val Thr Pro Ser Arg Leu  
                   180                  185                  190  
 Pro Thr Glu Pro Pro Ser Ser Val Ala Glu Phe Ser Glu Ala Thr Ala  
                   195                  200                  205  
 Glu Leu Thr Val Ser Phe Thr Asn Lys Val Phe Thr Thr Glu Thr Ser  
                   210                  215                  220  
 Arg Ser Ile Thr Thr Ser Pro Lys Glu Ser Asp Ser Pro Ala Gly Pro  
                   225                  230                  235                  240  
 Ala Arg Gln Tyr Tyr Thr Lys Gly Asn Leu Val Arg Ile Cys Leu Gly  
                   245                  250                  255  
 Ala Val Ile Leu Ile Ile Leu Ala Gly Phe Leu Ala Glu Asp Trp His  
                   260                  265                  270  
 Ser Arg Arg Lys Arg Leu Arg His Arg Gly Arg Ala Val Gln Arg Pro  
                   275                  280                  285  
 Leu Pro Pro Leu Pro Pro Leu Pro Gln Thr Arg Lys Ser His Gly Gly  
                   290                  295                  300  
 Gln Asp Gly Gly Arg Gln Asp Val His Ser Arg Gly Leu Cys Ser  
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 <213> Homo sapiens

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   20              25                  30  
 Arg Ser Leu Ala Gly Arg Tyr Arg Cys  
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 <212> PRT  
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 Asp Pro Ala Pro Tyr Lys Asn Pro Glu Arg Trp Tyr Arg Ala Ser Phe  
   20              25                  30  
 Pro Ile Ile Thr Val Thr Ala Ala His Ser Gly Thr Tyr Arg Cys  
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 <212> PRT

<213> Homo sapiens

<400> 8

Leu Val Arg Ile Cys Leu Gly Ala Val Ile Leu Ile Ile Leu Ala Gly  
1 5 10 15  
Phe Leu Ala

<210> 9

<211> 249

<212> PRT

<213> Homo sapiens

<400> 9

Gln Ser Gly Pro Leu Pro Lys Pro Ser Leu Gln Ala Leu Pro Ser Ser  
1 5 10 15  
Leu Val Pro Leu Glu Lys Pro Val Thr Leu Arg Cys Gln Gly Pro Pro  
20 25 30  
Gly Val Asp Leu Tyr Arg Leu Glu Lys Leu Ser Ser Ser Arg Tyr Gln  
35 40 45  
Asp Gln Ala Val Leu Phe Ile Pro Ala Met Lys Arg Ser Leu Ala Gly  
50 55 60  
Arg Tyr Arg Cys Ser Tyr Gln Asn Gly Ser Leu Trp Ser Leu Pro Ser  
65 70 75 80  
Asp Gln Leu Glu Leu Val Ala Thr Gly Val Phe Ala Lys Pro Ser Leu  
85 90 95  
Ser Ala Gln Pro Gly Pro Ala Val Ser Ser Gly Gly Asp Val Thr Leu  
100 105 110  
Gln Cys Gln Thr Arg Tyr Gly Phe Asp Gln Phe Ala Leu Tyr Lys Glu  
115 120 125  
Gly Asp Pro Ala Pro Tyr Lys Asn Pro Glu Arg Trp Tyr Arg Ala Ser  
130 135 140  
Phe Pro Ile Ile Thr Val Thr Ala Ala His Ser Gly Thr Tyr Arg Cys  
145 150 155 160  
Tyr Ser Phe Ser Ser Arg Asp Pro Tyr Leu Trp Ser Ala Pro Ser Asp  
165 170 175  
Pro Leu Glu Leu Val Val Thr Gly Thr Ser Val Thr Pro Ser Arg Leu  
180 185 190  
Pro Thr Glu Pro Pro Ser Ser Val Ala Glu Phe Ser Glu Ala Thr Ala  
195 200 205  
Glu Leu Thr Val Ser Phe Thr Asn Lys Val Phe Thr Thr Glu Thr Ser  
210 215 220  
Arg Ser Ile Thr Thr Ser Pro Lys Glu Ser Asp Ser Pro Ala Gly Pro  
225 230 235 240  
Ala Arg Gln Tyr Tyr Thr Lys Gly Asn  
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<211> 51

<212> PRT

<213> Homo sapiens

<400> 10

Glu Asp Trp His Ser Arg Arg Lys Arg Leu Arg His Arg Gly Arg Ala  
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Val Gln Arg Pro Leu Pro Pro Leu Pro Pro Leu Pro Gln Thr Arg Lys  
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Ser His Gly Gly Gln Asp Gly Gly Arg Gln Asp Val His Ser Arg Gly  
 35 40 45  
 Leu Cys Ser  
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<210> 11  
 <211> 2170  
 <212> DNA  
 <213> Homo sapiens

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 aagcccagag cccttgaca gaaataaccc actggAACCC aagaacaagg ccagattctc 300  
 catcccattcc atgacagagc accatgcccc gatatccgc tgccactatt acagctctgc 360  
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 atgagttat 2170

<210> 12  
 <211> 631  
 <212> PRT  
 <213> Homo sapiens

<400> 12  
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Pro Arg Thr Arg Val Gln Ala Gly Pro Phe Pro Lys Pro Thr Leu Trp  
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 Ala Glu Pro Gly Ser Val Ile Ser Trp Gly Ser Pro Val Thr Ile Trp  
                   35                  40                  45  
 Cys Gln Gly Ser Leu Glu Ala Gln Glu Tyr Arg Leu Asp Lys Glu Gly  
                   50                  55                  60  
 Ser Pro Glu Pro Leu Asp Arg Asn Asn Pro Leu Glu Pro Lys Asn Lys  
                   65                  70                  75                  80  
 Ala Arg Phe Ser Ile Pro Ser Met Thr Glu His His Ala Gly Arg Tyr  
                   85                  90                  95  
 Arg Cys His Tyr Tyr Ser Ser Ala Gly Trp Ser Glu Pro Ser Asp Pro  
                   100                105                110  
 Leu Glu Leu Val Met Thr Gly Phe Tyr Asn Lys Pro Thr Leu Ser Ala  
                   115                120                125  
 Leu Pro Ser Pro Val Val Ala Ser Gly Gly Asn Met Thr Leu Arg Cys  
                   130                135                140  
 Gly Ser Gln Lys Gly Tyr His His Phe Val Leu Met Lys Glu Gly Glu  
                   145                150                155                160  
 His Gln Leu Pro Arg Thr Leu Asp Ser Gln Gln Leu His Ser Gly Gly  
                   165                170                175  
 Phe Gln Ala Leu Phe Pro Val Gly Pro Val Asn Pro Ser His Arg Trp  
                   180                185                190  
 Arg Phe Thr Cys Tyr Tyr Tyr Met Asn Thr Pro Gln Val Trp Ser  
                   195                200                205  
 His Pro Ser Asp Pro Leu Glu Ile Leu Pro Ser Gly Val Ser Arg Lys  
                   210                215                220  
 Pro Ser Leu Leu Thr Leu Gln Gly Pro Val Leu Ala Pro Gly Gln Ser  
                   225                230                235                240  
 Leu Thr Leu Gln Cys Gly Ser Asp Val Gly Tyr Asp Arg Phe Val Leu  
                   245                250                255  
 Tyr Lys Glu Gly Glu Arg Asp Phe Leu Gln Arg Pro Gly Gln Gln Pro  
                   260                265                270  
 Gln Ala Gly Leu Ser Gln Ala Asn Phe Thr Leu Gly Pro Val Ser Pro  
                   275                280                285  
 Ser His Gly Gly Gln Tyr Arg Cys Tyr Gly Ala His Asn Leu Ser Ser  
                   290                295                300  
 Glu Trp Ser Ala Pro Ser Asp Pro Leu Asn Ile Leu Met Ala Gly Gln  
                   305                310                315                320  
 Ile Tyr Asp Thr Val Ser Leu Ser Ala Gln Pro Gly Pro Thr Val Ala  
                   325                330                335  
 Ser Gly Glu Asn Val Thr Leu Leu Cys Gln Ser Trp Trp Gln Phe Asp  
                   340                345                350  
 Thr Phe Leu Leu Thr Lys Glu Gly Ala Ala His Pro Pro Leu Arg Leu  
                   355                360                365  
 Arg Ser Met Tyr Gly Ala His Lys Tyr Gln Ala Glu Phe Pro Met Ser  
                   370                375                380  
 Pro Val Thr Ser Ala His Ala Gly Thr Tyr Arg Cys Tyr Gly Ser Tyr  
                   385                390                395                400  
 Ser Ser Asn Pro His Leu Leu Ser Phe Pro Ser Glu Pro Leu Glu Leu  
                   405                410                415  
 Met Val Ser Gly His Ser Gly Gly Ser Ser Leu Pro Pro Thr Gly Pro  
                   420                425                430  
 Pro Ser Thr Pro Gly Leu Gly Arg Tyr Leu Glu Val Leu Ile Gly Val  
                   435                440                445  
 Ser Val Ala Phe Val Leu Leu Leu Phe Leu Leu Phe Leu Leu Leu  
                   450                455                460  
 Arg Arg Gln Arg His Ser Lys His Arg Thr Ser Asp Gln Arg Lys Thr  
                   465                470                475                480

Asp Phe Gln Arg Pro Ala Gly Ala Ala Glu Thr Glu Pro Lys Asp Arg  
                   485                  490                  495  
 Gly Leu Leu Arg Arg Ser Ser Pro Ala Ala Asp Val Gln Glu Glu Asn  
                   500                  505                  510  
 Leu Tyr Ala Ala Val Lys Asp Thr Gln Ser Glu Asp Arg Val Glu Leu  
                   515                  520                  525  
 Asp Ser Gln Ser Pro His Asp Glu Asp Pro Gln Ala Val Thr Tyr Ala  
                   530                  535                  540  
 Pro Val Lys His Ser Ser Pro Arg Arg Glu Met Ala Ser Pro Pro Ser  
                   545                  550                  555                  560  
 Ser Leu Ser Gly Glu Phe Leu Asp Thr Lys Asp Arg Gln Val Glu Glu  
                   565                  570                  575  
 Asp Arg Gln Met Asp Thr Glu Ala Ala Ser Glu Ala Ser Gln Asp  
                   580                  585                  590  
 Val Thr Tyr Ala Gln Leu His Ser Leu Thr Leu Arg Arg Lys Ala Thr  
                   595                  600                  605  
 Glu Pro Pro Pro Ser Gln Glu Gly Glu Pro Pro Ala Glu Pro Ser Ile  
                   610                  615                  620  
 Tyr Ala Thr Leu Ala Ile His  
                   625                  630

<210> 13  
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 <213> Homo sapiens

<400> 13  
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 Tyr Arg Leu Glu Lys Leu Lys Pro Glu Lys Tyr Glu Asp Gln Asp Phe  
   20              25                  30  
 Leu Phe Ile Pro Thr Met Glu Arg Ser Asn Ala Gly Arg Tyr Arg Cys  
   35              40                  45

Ser Tyr  
   50

<210> 14  
 <211> 1163  
 <212> DNA  
 <213> Mus musculus

<400> 14  
 gagtcgaccc acgcgtccgc ttccctgctt ggcacatag ctcaggactg gggtgcagaa   60  
 ccatgtctcc agcctcaccc actttcttct gtattggct gtgtgtactg caagtgtatcc 120  
 aaacacagag tggccactc cccaagcctt ccctccaggg tcagcccaatg tccctggtaac 180  
 ccctgggtca gtcagttatt ctgaggtgcc agggacctcc agatgtggat ttatatcgcc 240  
 tggagaaact gaaaccggag aagtatgaag atcaagactt tcttttcatt ccaaccatgg 300  
 aaagaagtaa tgctggacgg tatcgatgct cttatcagaa tggagtcac tggctctctcc 360  
 caagtgcacca gcttgagcta attgctacag gtgtgtatgc taaacctca ctctcagctc 420  
 atcccagctc agcagtcctt caaggcaggg atgtgactct gaagtgccag agcccataca 480  
 gttttatgttattt attcggttcttataaaaagaag gggatactgg gccttataag agacctgaga 540  
 aatggtaccc ggcattttcc cccatcatca cagtgcactgc tgctcacatgg ggacgtacc 600  
 ggtgttacag ctctccagtc tcatctccat acctgtggtc agccccaggt gaccctcttag 660  
 tgcttgggt tactggactc tctgcccactc ccagccaggt acccacggaa gatatcatttc 720  
 ctgtgacaga atctccagg agaccttcca tcttacccac aaacaaaata tctacaactg 780  
 aaaaggcttat gaatatcact gcctctccag aggggctgag ccctccaaatt ggttttgctc 840  
 atcagcacta tgccaagggg aatctggtcc ggtatgcct tggtgcacg attataataa 900  
 ttttgtggg gcttctagca gaggattggc acagtcggaa gaaatgcctg caacacagga 960

tgagagctt gcaaaggcca ctaccacccc tcccactggc ctagaaataa cttggcttc	1020
agcagaggga ttgaccagac atccatgcac aaccatggac atcaccacta gagccacaga	1080
catggacata ctcaagagtg gggaggttat ataaaaaaaat gagtgtggag aataaatgca	1140
gagccaacaa ggtgaaaaaaaaaaa aaa	1163

<210> 15  
 <211> 939  
 <212> DNA  
 <213> Mus musculus

<400> 15	
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acacagagtg gcccactccc caagccttcc ctccaggctc agcccagttc cctggtaccc	120
ctgggtcagt cagtattct gaggtgcag ggacctccag atgtggattt atatgcctg	180
gagaaactga aaccggagaa gtatgaagat caagacttcc tcttcattcc aaccatggaa	240
agaagtaatg ctggacggta tcgatgcctt tatacataatg ggagtcactg gtctctccca	300
agtgaccagc tttagtcaat tgctacaggt gtgtatgcta aaccctcact ctcagctcat	360
cccagctcag cagtccctca aggcaaggat gtactctga agtgcacagag cccatacagt	420
tttgatgaat tcgatgtata caaagaaggg gatactgggc cttataagag acctgagaaa	480
tggtacccggg ccaatttccc catcatcaca gtgactgctg ctcacagtgg gacgtaccgg	540
tgttacagct tctccagctc atctccatac ctgtggtcag ccccgagtgaa ccctctagtg	600
cttgtggta ctggactctc tgccactccc agccaggatcc acacggaaatacatttcc	660
gtgacagaat cctccaggag accttccatc ttacccacaa aaaaaatatac tacaactgaa	720
aaggctatga atatcactgc ctctccagag gggctgagcc ctccaaattgg tttgctcat	780
cagcactatg ccaagggaa tctggcccg atatgccttg gtgccacgat tataataatt	840
ttgttgggc ttcttagcaga ggattggcac agtcggaaaga aatgcctgca acacaggatg	900
agagcttgc aaaggccact accaccctc ccactggcc	939

<210> 16  
 <211> 313  
 <212> PRT  
 <213> Mus musculus

<400> 16	
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1 5 10 15	
Gln Val Ile Gln Thr Gln Ser Gly Pro Leu Pro Lys Pro Ser Leu Gln	
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Ala Gln Pro Ser Ser Leu Val Pro Leu Gly Gln Ser Val Ile Leu Arg	
35 40 45	
Cys Gln Gly Pro Pro Asp Val Asp Leu Tyr Arg Leu Glu Lys Leu Lys	
50 55 60	
Pro Glu Lys Tyr Glu Asp Gln Asp Phe Leu Phe Ile Pro Thr Met Glu	
65 70 75 80	
Arg Ser Asn Ala Gly Arg Tyr Arg Cys Ser Tyr Gln Asn Gly Ser His	
85 90 95	
Trp Ser Leu Pro Ser Asp Gln Leu Glu Leu Ile Ala Thr Gly Val Tyr	
100 105 110	
Ala Lys Pro Ser Leu Ser Ala His Pro Ser Ser Ala Val Pro Gln Gly	
115 120 125	
Arg Asp Val Thr Leu Lys Cys Gln Ser Pro Tyr Ser Phe Asp Glu Phe	
130 135 140	
Val Leu Tyr Lys Glu Gly Asp Thr Gly Pro Tyr Lys Arg Pro Glu Lys	
145 150 155 160	
Trp Tyr Arg Ala Asn Phe Pro Ile Ile Thr Val Thr Ala Ala His Ser	
165 170 175	
Gly Thr Tyr Arg Cys Tyr Ser Phe Ser Ser Ser Pro Tyr Leu Trp	
180 185 190	

Ser Ala Pro Ser Asp Pro Leu Val Leu Val Val Thr Gly Leu Ser Ala  
 195 200 205  
 Thr Pro Ser Gln Val Pro Thr Glu Glu Ser Phe Pro Val Thr Glu Ser  
 210 215 220  
 Ser Arg Arg Pro Ser Ile Leu Pro Thr Asn Lys Ile Ser Thr Thr Glu  
 225 230 235 240  
 Lys Pro Met Asn Ile Thr Ala Ser Pro Glu Gly Leu Ser Pro Pro Ile  
 245 250 255  
 Gly Phe Ala His Gln His Tyr Ala Lys Gly Asn Leu Val Arg Ile Cys  
 260 265 270  
 Leu Gly Ala Thr Ile Ile Ile Leu Leu Gly Leu Leu Ala Glu Asp  
 275 280 285  
 Trp His Ser Arg Lys Lys Cys Leu Gln His Arg Met Arg Ala Leu Gln  
 290 295 300  
 Arg Pro Leu Pro Pro Leu Pro Leu Ala  
 305 310

<210> 17  
 <211> 21  
 <212> PRT  
 <213> Mus musculus

<400> 17  
 Met Ser Pro Ala Ser Pro Thr Phe Phe Cys Ile Gly Leu Cys Val Leu  
 1 5 10 15  
 Gln Val Ile Gln Thr  
 20

<210> 18  
 <211> 292  
 <212> PRT  
 <213> Mus musculus

<400> 18  
 Gln Ser Gly Pro Leu Pro Lys Pro Ser Leu Gln Ala Gln Pro Ser Ser  
 1 5 10 15  
 Leu Val Pro Leu Gly Gln Ser Val Ile Leu Arg Cys Gln Gly Pro Pro  
 20 25 30  
 Asp Val Asp Leu Tyr Arg Leu Glu Lys Leu Lys Pro Glu Lys Tyr Glu  
 35 40 45  
 Asp Gln Asp Phe Leu Phe Ile Pro Thr Met Glu Arg Ser Asn Ala Gly  
 50 55 60  
 Arg Tyr Arg Cys Ser Tyr Gln Asn Gly Ser His Trp Ser Leu Pro Ser  
 65 70 75 80  
 Asp Gln Leu Glu Leu Ile Ala Thr Gly Val Tyr Ala Lys Pro Ser Leu  
 85 90 95  
 Ser Ala His Pro Ser Ser Ala Val Pro Gln Gly Arg Asp Val Thr Leu  
 100 105 110  
 Lys Cys Gln Ser Pro Tyr Ser Phe Asp Glu Phe Val Leu Tyr Lys Glu  
 115 120 125  
 Gly Asp Thr Gly Pro Tyr Lys Arg Pro Glu Lys Trp Tyr Arg Ala Asn  
 130 135 140  
 Phe Pro Ile Ile Thr Val Thr Ala Ala His Ser Gly Thr Tyr Arg Cys  
 145 150 155 160  
 Tyr Ser Phe Ser Ser Ser Pro Tyr Leu Trp Ser Ala Pro Ser Asp  
 165 170 175  
 Pro Leu Val Leu Val Val Thr Gly Leu Ser Ala Thr Pro Ser Gln Val  
 180 185 190

Pro Thr Glu Glu Ser Phe Pro Val Thr Glu Ser Ser Arg Arg Pro Ser  
 195 200 205  
 Ile Leu Pro Thr Asn Lys Ile Ser Thr Thr Glu Lys Pro Met Asn Ile  
 210 215 220  
 Thr Ala Ser Pro Glu Gly Leu Ser Pro Pro Ile Gly Phe Ala His Gln  
 225 230 235 240  
 His Tyr Ala Lys Gly Asn Leu Val Arg Ile Cys Leu Gly Ala Thr Ile  
 245 250 255  
 Ile Ile Ile Leu Gly Leu Leu Ala Glu Asp Trp His Ser Arg Lys  
 260 265 270  
 Lys Cys Leu Gln His Arg Met Arg Ala Leu Gln Arg Pro Leu Pro Pro  
 275 280 285  
 Leu Pro Leu Ala  
 290

<210> 19  
 <211> 267  
 <212> PRT  
 <213> Mus musculus

<400> 19  
 Met Ser Pro Ala Ser Pro Thr Phe Phe Cys Ile Gly Leu Cys Val Leu  
 1 5 10 15  
 Gln Val Ile Gln Thr Gln Ser Gly Pro Leu Pro Lys Pro Ser Leu Gln  
 20 25 30  
 Ala Gln Pro Ser Ser Leu Val Pro Leu Gly Gln Ser Val Ile Leu Arg  
 35 40 45  
 Cys Gln Gly Pro Pro Asp Val Asp Leu Tyr Arg Leu Glu Lys Leu Lys  
 50 55 60  
 Pro Glu Lys Tyr Glu Asp Gln Asp Phe Leu Phe Ile Pro Thr Met Glu  
 65 70 75 80  
 Arg Ser Asn Ala Gly Arg Tyr Arg Cys Ser Tyr Gln Asn Gly Ser His  
 85 90 95  
 Trp Ser Leu Pro Ser Asp Gln Leu Glu Leu Ile Ala Thr Gly Val Tyr  
 100 105 110  
 Ala Lys Pro Ser Leu Ser Ala His Pro Ser Ser Ala Val Pro Gln Gly  
 115 120 125  
 Arg Asp Val Thr Leu Lys Cys Gln Ser Pro Tyr Ser Phe Asp Glu Phe  
 130 135 140  
 Val Leu Tyr Lys Glu Gly Asp Thr Gly Pro Tyr Lys Arg Pro Glu Lys  
 145 150 155 160  
 Trp Tyr Arg Ala Asn Phe Pro Ile Ile Thr Val Thr Ala Ala His Ser  
 165 170 175  
 Gly Thr Tyr Arg Cys Tyr Ser Phe Ser Ser Ser Pro Tyr Leu Trp  
 180 185 190  
 Ser Ala Pro Ser Asp Pro Leu Val Leu Val Val Thr Gly Leu Ser Ala  
 195 200 205  
 Thr Pro Ser Gln Val Pro Thr Glu Glu Ser Phe Pro Val Thr Glu Ser  
 210 215 220  
 Ser Arg Arg Pro Ser Ile Leu Pro Thr Asn Lys Ile Ser Thr Thr Glu  
 225 230 235 240  
 Lys Pro Met Asn Ile Thr Ala Ser Pro Glu Gly Leu Ser Pro Pro Ile  
 245 250 255  
 Gly Phe Ala His Gln His Tyr Ala Lys Gly Asn  
 260 265

<210> 20  
 <211> 19

<212> PRT  
 <213> Mus musculus

<400> 20  
 Leu Val Arg Ile Cys Leu Gly Ala Thr Ile Ile Ile Ile Leu Leu Gly  
 1 5 10 15  
 Leu Leu Ala

<210> 21  
 <211> 27  
 <212> PRT  
 <213> Mus musculus

<400> 21  
 Glu Asp Trp His Ser Arg Lys Lys Cys Leu Gln His Arg Met Arg Ala  
 1 5 10 15  
 Leu Gln Arg Pro Leu Pro Pro Leu Pro Leu Ala  
 20 25

<210> 22  
 <211> 41  
 <212> PRT  
 <213> Mus musculus

<400> 22  
 Cys Gln Gly Pro Pro Asp Val Asp Leu Tyr Arg Leu Glu Lys Leu Lys  
 1 5 10 15  
 Pro Glu Lys Tyr Glu Asp Gln Asp Phe Leu Phe Ile Pro Thr Met Glu  
 20 25 30  
 Arg Ser Asn Ala Gly Arg Tyr Arg Cys  
 35 40

<210> 23  
 <211> 47  
 <212> PRT  
 <213> Mus musculus

<400> 23  
 Cys Gln Ser Pro Tyr Ser Phe Asp Glu Phe Val Leu Tyr Lys Glu Gly  
 1 5 10 15  
 Asp Thr Gly Pro Tyr Lys Arg Pro Glu Lys Trp Tyr Arg Ala Asn Phe  
 20 25 30  
 Pro Ile Ile Thr Val Thr Ala Ala His Ser Gly Thr Tyr Arg Cys  
 35 40 45

<210> 24  
 <211> 1896  
 <212> DNA  
 <213> Homo sapiens

<400> 24  
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 gtgcaggcag ggccttccc caaaccacc ctctggctg agccaggtc tgtgatcagc 120  
 tgggggagcc ccgtgaccat ctggtgtcag gggagcctgg aggccccagga gtaccgactg 180  
 gataaaagagg gaagcccaga gcccttggac agaaaataacc cactggaacc caagaacaag 240  
 gccagatct ccatccccatc catgacagag caccatgcgg ggagataccg ctgccactat 300  
 tacagctctg caggctggtc agagccagc gacccctgg agctggtgat gacaggattc 360

tacaacaaac ccaccctctc agccctgccc agccctgtgg tggcctcagg gggaaatatg	420
accctccat gtggctcaca gaaggatata caccattttt ttctgatgaa ggaaggagaa	480
caccagctcc cccggaccct ggactcacag cagctccaca gtgggggggtt ccaggccctg	540
ttccctgtgg gccccgtgaa ccccagccac aggtggaggt tcacatgcta ttactattat	600
atgaacaccc cccaggtgtg gtcccacccc agtgacccccc tggagattct gccctcaggc	660
gtgtcttagga agccctccct cctgaccctg caggccctg tcctggggcc tgggcagagc	720
ctgaccctcc agtgtggctc tgatgtcggt tacagacatg ttgttctgtta taaggagggg	780
gaacgtgact tcctccagcg ccctggccag cagccccagg ctgggctctc ccaggccaac	840
ttcaccctgg gccccgtgag cccctccac gggggccagt acaggtgcta tggtcacac	900
aacctctcct ccgagtggtc ggccccccagg gacccctga acatcctgat ggcaggacag	960
atctatgaca ccgtctccct gtcagcacag ccggggccca cagtggctc aggagagaac	1020
gtgaccctgc tgtgtcagtc atggtggcag tttgacactt tccttctgac caaagaagggg	1080
gcagcccatc ccccaactgcg tctgagatca atgtacggag ctcataagta ccaggctgaa	1140
ttccccatga gtcctgtgac ctcagccac gcggggacct acaggtgcta cggtcatac	1200
agctccaacc cccacacgtc gtctttcccc agtgagcccc tggaaactcat ggtctcagga	1260
cactctggag gctccagccccc cccaccacca gggccgcctt ccacacctgg tctgggaaga	1320
tacctggagg ttttggattgg ggtctcggt gccttcgtcc tgctgctctt ctcctccctc	1380
ttcctccctcc tccgacgtca gctgtcacagc aaacacagga catctgacca gagaaagact	1440
gatttccagc gtcctgcagg ggctgcggag acagagccca aggacagggg cctgctgagg	1500
aggtccagcc cagctgctga cgtccagaa gaaaacctct atgctgccgt gaaggacaca	1560
cagtctgagg acagggtgga gctggacagt cagagccac acgtgaaga ccccccaggca	1620
gtgacgtatg ccccggtgaa acactccagt cctaggagag aaatggcctc tcctccctcc	1680
tcactgtctg gggaaatttcct ggacacaaag gacagacagg tggaaagagga caggcagatg	1740
gacactgagg ctgctgcattc tgaaggctcc cagatgtga cctacgccc gctgcacagc	1800
ttgaccctta gacggaaggc aactgaggct ctcctccatccc aggaagggga acctccagct	1860
gagcccaagca tctacgcccac tctggccatc cactag	1896

<210> 25  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> forward primer

<400> 25

cagcctcacc cactttcttc 20

<210> 26  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> reverse primer

<400> 26

ccacaaggcac tagagggtca 20

<210> 27  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> sense primer

<400> 27

ttctgtcttg ggctgtgtct g	21
<210> 28	
<211> 21	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> anti-sense primer	
<400> 28	
cccgccagga ttattaggat c	21
<210> 29	
<211> 21	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> sense primer	
<400> 29	
cctgaagctg acagcattcg g	21
<210> 30	
<211> 21	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> anti-sense primer	
<400> 30	
ctcctagagc tacctgtgga g	21
<210> 31	
<211> 23	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> forward primer	
<400> 31	
ctgttagctgt tttcagacac acc	23
<210> 32	
<211> 21	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> reverse primer	
<400> 32	
ccatcacctc ttctggta c	21
<210> 33	

<211> 1017  
 <212> DNA  
 <213> Homo sapiens

<400> 33  
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 cagagtggac cgccccaa gcctccctc caggctctgc ccagctccct ggtgcccctg 120  
 gagaagccag tgaccctccg gtgccaggga cctccggcg tggacctgta ccgcctggag 180  
 aagctgagtt ccagcaggtt ccaggatcag gcagtcctct tcatcccgcc catgaagaga 240  
 agtctggctg gacgctaccg ctgtcttac cagaacggaa gcctctggtc cctgcccagc 300  
 gaccagctgg agctcggtgc cacgggagtt ttgcacaaac cctcgctctc agcccgagccc 360  
 ggcccgccgg tgtcgtcagg aggggacgta accctacagt gtcagactcg gtatggctt 420  
 gaccaatttg ctctgtacaa ggaaggggac cctgcgcctt acaagaatcc cgagagatgg 480  
 taccgggcta gttccccat catcacgggtg accggccccc acagcgaac ctaccgatgc 540  
 tacagctctc ccagcaggga cccatacctg tggcgcccc ccagcgaacc cctggagctt 600  
 gtggtcacag gaacctctgt gaccccccagc cggttaccaa cagaaccacc ttcctcggtta 660  
 gcagaattct cagaagccac cgctgaactg accgtctcat tcacaaaaca agtcttcaca 720  
 actgagactt ctaggagtt caccaccagt ccaaaggagt cagactctcc agctggtcct 780  
 gcccgcactg actacaccaa gggcaacctg gtccggatat gcctcggggc tggatccata 840  
 ataatcctgg cggggttct ggcagaggac tggcacagcc ggaggaagcg cctgcggcac 900  
 aggggcaggg ctgtgcagag gccgcttccg cccctgccc gcctcccgca gacccggaaa 960  
 tcacacgggg gtcaaggatgg aggccgacag gatgttcaca gccgcgggtt atgttca 1017

<210> 34  
 <211> 339  
 <212> PRT  
 <213> Homo sapiens

<400> 34  
 Met Ser Pro Ser Pro Thr Ala Leu Phe Cys Leu Gly Leu Cys Leu Gly  
 1 5 10 15  
 Arg Val Pro Ala Gln Ser Gly Pro Leu Pro Lys Pro Ser Leu Gln Val  
 20 25 30  
 Leu Pro Ser Ser Leu Val Pro Leu Glu Lys Pro Val Thr Leu Arg Cys  
 35 40 45  
 Gln Gly Pro Pro Gly Val Asp Leu Tyr Arg Leu Glu Lys Leu Ser Ser  
 50 55 60  
 Ser Arg Tyr Gln Asp Gln Ala Val Leu Phe Ile Pro Ala Met Lys Arg  
 65 70 75 80  
 Ser Leu Ala Gly Arg Tyr Arg Cys Ser Tyr Gln Asn Gly Ser Leu Trp  
 85 90 95  
 Ser Leu Pro Ser Asp Gln Leu Glu Leu Val Ala Thr Gly Val Phe Ala  
 100 105 110  
 Lys Pro Ser Leu Ser Ala Gln Pro Gly Pro Ala Val Ser Ser Gly Gly  
 115 120 125  
 Asp Val Thr Leu Gln Cys Gln Thr Arg Tyr Gly Phe Asp Gln Phe Ala  
 130 135 140  
 Leu Tyr Lys Glu Gly Asp Pro Ala Pro Tyr Lys Asn Pro Glu Arg Trp  
 145 150 155 160  
 Tyr Arg Ala Ser Phe Pro Ile Ile Thr Val Thr Ala Ala His Ser Gly  
 165 170 175  
 Thr Tyr Arg Cys Tyr Ser Phe Ser Ser Arg Asp Pro Tyr Leu Trp Ser  
 180 185 190  
 Ala Pro Ser Asp Pro Leu Glu Leu Val Val Thr Gly Thr Ser Val Thr  
 195 200 205  
 Pro Ser Arg Leu Pro Thr Glu Pro Pro Ser Ser Val Ala Glu Phe Ser  
 210 215 220

Glu Ala Thr Ala Glu Leu Thr Val Ser Phe Thr Asn Lys Val Phe Thr  
 225 230 235 240  
 Thr Glu Thr Ser Arg Ser Ile Thr Thr Ser Pro Lys Glu Ser Asp Ser  
 245 250 255  
 Pro Ala Gly Pro Ala Arg Gln Tyr Tyr Thr Lys Gly Asn Leu Val Arg  
 260 265 270  
 Ile Cys Leu Gly Ala Val Ile Leu Ile Leu Ala Gly Phe Leu Ala  
 275 280 285  
 Glu Asp Trp His Ser Arg Arg Lys Arg Leu Arg His Arg Gly Arg Ala  
 290 295 300  
 Val Gln Arg Pro Leu Pro Pro Leu Pro Pro Leu Pro Gln Thr Arg Lys  
 305 310 315 320  
 Ser His Gly Gln Asp Gly Gly Arg Gln Asp Val His Ser Arg Gly  
 325 330 335  
 Leu Cys Ser

<210> 35  
 <211> 1017  
 <212> DNA  
 <213> Homo sapiens

<400> 35  
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 cagagtggac cgctcccaa gcccctc caggctctgc ccagctccct ggtgcccc 120  
 gagaagccag tgaccctccg gtgccaggga cctccggcg tggacctgta ccgcctggag 180  
 aagctgagtt ccagcaggtt ccaggatcat gtagtcccttc tcattccggc catgaagaga 240  
 agtctggctg gacgctaccg ctgctctac cagaacggaa gcctctggc cctgccc 300  
 gaccagctgg agctcggttgc cacggagtt ttgccaac cctcgctctc agcccgagccc 360  
 ggccggcg gtcgtcagg aggggacgta accctacagt gtcagactcg gtatggctt 420  
 gaccaatttgc ctctgtacaa ggaaggggac cctgcgcctt acaagaatcc cgagagatgg 480  
 taccgggcta gttccccat catcacggtg accggccccc acagcgaac ctaccgatgc 540  
 tacagcttcc ctagcaggga cccataacctg tggcggccc ccagcgaaccc cctggagctt 600  
 gtggtcacag gaacctctgt gaccccgacg cggttaccaa cagaaccacc ttccctcggt 660  
 gcagaatttgc cagaagccac cgctgaactg accgtctcat tcacaacaa agtcttcaca 720  
 actgagactt ctaggagtt caccaccagt ccaaaggagt cagactctcc agctggctt 780  
 gcccggcactt actacaccaa gggcaacctg gtccggatat gcctcgggc tggatccta 840  
 ataatcctgg cgggtttct ggcagaggac tggcacagcc ggaggaagcg cctgcggcac 900  
 aggggcaggg ctgtgcagag gccgcttccg cccctgccc ccctcccgca gaccggaaa 960  
 tcacacgggg gtcaggatgg aggccgacag gatgttcaca gccgcgggtt atgttca 1017

<210> 36  
 <211> 339  
 <212> PRT  
 <213> Homo sapiens

<400> 36  
 Met Ser Pro Ser Pro Thr Ala Leu Phe Cys Leu Gly Leu Cys Leu Gly  
 1 5 10 15  
 Arg Val Pro Ala Gln Ser Gly Pro Leu Pro Lys Pro Ser Leu Gln Ala  
 20 25 30  
 Leu Pro Ser Ser Leu Val Pro Leu Glu Lys Pro Val Thr Leu Arg Cys  
 35 40 45  
 Gln Gly Pro Pro Gly Val Asp Leu Tyr Arg Leu Glu Lys Leu Ser Ser  
 50 55 60  
 Ser Arg Tyr Gln Asp Gln Val Val Leu Phe Ile Pro Ala Met Lys Arg  
 65 70 75 80

Ser Leu Ala Gly Arg Tyr Arg Cys Ser Tyr Gln Asn Gly Ser Leu Trp  
       85                    90                    95  
 Ser Leu Pro Ser Asp Gln Leu Glu Leu Val Ala Thr Gly Val Phe Ala  
       100                105                110  
 Lys Pro Ser Leu Ser Ala Gln Pro Gly Pro Ala Val Ser Ser Gly Gly  
       115                120                125  
 Asp Val Thr Leu Gln Cys Gln Thr Arg Tyr Gly Phe Asp Gln Phe Ala  
       130                135                140  
 Leu Tyr Lys Glu Gly Asp Pro Ala Pro Tyr Lys Asn Pro Glu Arg Trp  
       145                150                155                160  
 Tyr Arg Ala Ser Phe Pro Ile Ile Thr Val Thr Ala Ala His Ser Gly  
       165                170                175  
 Thr Tyr Arg Cys Tyr Ser Phe Ser Ser Arg Asp Pro Tyr Leu Trp Ser  
       180                185                190  
 Ala Pro Ser Asp Pro Leu Glu Leu Val Val Thr Gly Thr Ser Val Thr  
       195                200                205  
 Pro Ser Arg Leu Pro Thr Glu Pro Pro Ser Ser Val Ala Glu Phe Ser  
       210                215                220  
 Glu Ala Thr Ala Glu Leu Thr Val Ser Phe Thr Asn Lys Val Phe Thr  
       225                230                235                240  
 Thr Glu Thr Ser Arg Ser Ile Thr Thr Ser Pro Lys Glu Ser Asp Ser  
       245                250                255  
 Pro Ala Gly Pro Ala Arg Gln Tyr Tyr Lys Gly Asn Leu Val Arg  
       260                265                270  
 Ile Cys Leu Gly Ala Val Ile Leu Ile Ile Leu Ala Gly Phe Leu Ala  
       275                280                285  
 Glu Asp Trp His Ser Arg Arg Lys Arg Leu Arg His Arg Gly Arg Ala  
       290                295                300  
 Val Gln Arg Pro Leu Pro Pro Leu Pro Pro Leu Pro Gln Thr Arg Lys  
       305                310                315                320  
 Ser His Gly Gly Gln Asp Gly Gly Arg Gln Asp Val His Ser Arg Gly  
       325                330                335  
 Leu Cys Ser

<210> 37  
 <211> 1017  
 <212> DNA  
 <213> Homo sapiens

<400> 37

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cagagtggac	cgctcccaa	gcccctcctc	caggctctgc	ccagctccct	ggtgccctcg	120
gagaagccag	tgaccctccg	gtgccaggga	cctccgggcg	tggacctgta	ccgcctggag	180
aagctgagtt	ccagcaggtt	ccaggatcag	gcagtcctct	tcatccggc	catgaagaga	240
agtctggctg	gacgctaccg	ctgctcc tac	cagaacggaa	gcctctggtc	cctgcccagc	300
gaccagctgg	agctcggtgc	cacggagtt	tttgc caaac	cctcgctctc	agcccagccc	360
ggcccgccgg	tgtcg tcagg	aggggac gta	accctac agt	gtcagactcg	gtatggcttt	420
gaccaattt g	ctctgtacaa	ggaaggggac	cctgc cccct	acaagaatcc	cgagagatgg	480
taccgggcta	gttccccat	catcacggcg	accgc cggcc	acagc ggaac	ctaccgatgc	540
tacagcttct	ccagcaggga	ccatacctg	tgg tggggccc	ccagc gaccc	cctggagctt	600
gtggtcacag	gaacctctgt	gacccc cagc	cggtt accaa	cagaacc acc	ttcctcggta	660
gcagaattct	cagaagccac	cgctgaactg	accgtctcat	tcaca aacaa	agtcttcaca	720
actgagactt	ctaggagtat	caccacc agt	ccaaaggag t	cagactctcc	agctggtcct	780
gcccgc cagt	actacaccaa	gggcaacctg	gtccggat at	gcctcggg gc	tgtgatccta	840
ataatcc tgg	cggggtt tct	ggcagaggac	tggcacagcc	ggaggaagcg	cctgcggc ac	900
aggggca qgg	ctgtgcagag	gcccgttccg	ccctgtccgc	ccctccgc a	gaccggaaa	960
tcacacgggg	gtcaggatgg	aggccgacag	gatgttcaca	gccgcggg tt	atgttca	1017

<210> 38  
 <211> 339  
 <212> PRT  
 <213> Homo sapiens

<400> 38

Met	Ser	Pro	Ser	Pro	Thr	Ala	Leu	Phe	Cys	Leu	Gly	Leu	Cys	Leu	Gly
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Arg	Val	Pro	Ala	Gln	Ser	Gly	Pro	Leu	Pro	Lys	Pro	Ser	Leu	Gln	Ala
								20		25					30
Leu	Pro	Ser	Ser	Leu	Val	Pro	Leu	Glu	Lys	Pro	Val	Thr	Leu	Arg	Cys
								35		40					45
Gln	Gly	Pro	Pro	Gly	Val	Asp	Leu	Tyr	Arg	Leu	Glu	Lys	Leu	Ser	Ser
						50		55			60				
Ser	Arg	Tyr	Gln	Asp	Gln	Ala	Val	Leu	Phe	Ile	Pro	Ala	Met	Lys	Arg
	65						70			75					80
Ser	Leu	Ala	Gly	Arg	Tyr	Arg	Cys	Ser	Tyr	Gln	Asn	Gly	Ser	Leu	Trp
							85			90					95
Ser	Leu	Pro	Ser	Asp	Gln	Leu	Glu	Leu	Val	Ala	Thr	Gly	Val	Phe	Ala
						100			105						110
Lys	Pro	Ser	Leu	Ser	Ala	Gln	Pro	Gly	Pro	Ala	Val	Ser	Ser	Gly	Gly
						115		120				125			
Asp	Val	Thr	Leu	Gln	Cys	Gln	Thr	Arg	Tyr	Gly	Phe	Asp	Gln	Phe	Ala
	130						135				140				
Leu	Tyr	Lys	Glu	Gly	Asp	Pro	Ala	Pro	Tyr	Lys	Asn	Pro	Glu	Arg	Trp
	145						150			155					160
Tyr	Arg	Ala	Ser	Phe	Pro	Ile	Ile	Thr	Ala	Thr	Ala	Ala	His	Ser	Gly
						165			170						175
Thr	Tyr	Arg	Cys	Tyr	Ser	Phe	Ser	Ser	Arg	Asp	Pro	Tyr	Leu	Trp	Ser
						180			185						190
Ala	Pro	Ser	Asp	Pro	Leu	Glu	Leu	Val	Val	Thr	Gly	Thr	Ser	Val	Thr
						195		200			205				
Pro	Ser	Arg	Leu	Pro	Thr	Glu	Pro	Pro	Ser	Ser	Val	Ala	Glu	Phe	Ser
						210		215			220				
Glu	Ala	Thr	Ala	Glu	Leu	Thr	Val	Ser	Phe	Thr	Asn	Lys	Val	Phe	Thr
	225						230			235					240
Thr	Glu	Thr	Ser	Arg	Ser	Ile	Thr	Thr	Ser	Pro	Lys	Glu	Ser	Asp	Ser
						245			250			255			
Pro	Ala	Gly	Pro	Ala	Arg	Gln	Tyr	Tyr	Thr	Lys	Gly	Asn	Leu	Val	Arg
						260			265			270			
Ile	Cys	Leu	Gly	Ala	Val	Ile	Leu	Ile	Ile	Leu	Ala	Gly	Phe	Leu	Ala
						275			280			285			
Glu	Asp	Trp	His	Ser	Arg	Arg	Lys	Arg	Leu	Arg	His	Arg	Gly	Arg	Ala
						290		295			300				
Val	Gln	Arg	Pro	Leu	Pro	Pro	Leu	Pro	Pro	Leu	Pro	Gln	Thr	Arg	Lys
	305						310			315					320
Ser	His	Gly	Gly	Gln	Asp	Gly	Gly	Arg	Gln	Asp	Val	His	Ser	Arg	Gly
						325			330			335			
Leu	Cys	Ser													

<210> 39  
 <211> 1017  
 <212> DNA  
 <213> Homo sapiens

<400> 39

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aagctgagtt	ccagcaggta	ccaggatcag	gcagtcctct	tcatccggc	catgaagaga	240
agtctggctg	gacgctaccg	ctgctcctac	cagaacggaa	gcctctggtc	cctgcccagc	300
gaccagctgg	agctcgttgc	cacgggagtt	tttgc当地	cctcgctctc	agcccagccc	360
ggccggcgg	tgtcgctcagg	aggggacgta	accctacagt	gtcagactcg	gtatggctt	420
gaccaatttg	ctctgtacaa	ggaaggggac	cctgc当地	acaagaatcc	cgagagatgg	480
taccgggcta	gttccccat	catcacggtg	acggccgccc	acagc当地	ctaccgatgc	540
tacagcttct	ccagcaggga	ccc当地	tggtc当地	ccagc当地	cctggagctt	600
gtggtc当地	gaacctctgt	gacccc当地	cgg当地	cagaaccacc	ttccctcggt	660
gcagaattct	cagaagccac	cgctgaactg	acggtctcat	tcacaaacaa	agtcttcaca	720
actgagactt	ctaggagtt	caccaccgt	ccaaaggagt	cagactctcc	agctggtctt	780
gccc当地	actacaccaa	gggcaacctg	gtccggat	gcctc当地	tgtgatccta	840
ataatccctgg	cgggg当地	ggc当地	tggcacagcc	ggaggaagcg	cctgc当地	900
aggggc当地	ctgtgc当地	gccc当地	ccctcccgca	gacc	ccggaaa	960
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<210> 40  
 <211> 339  
 <212> PRT  
 <213> Homo sapiens

<400> 40															
Met	Ser	Pro	Ser	Pro	Thr	Ala	Leu	Phe	Cys	Leu	Gly	Leu	Cys	Leu	Gly
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Arg	Val	Pro	Ala	Gln	Ser	Gly	Pro	Leu	Pro	Lys	Pro	Ser	Leu	Gln	Ala
							20		25				30		
Leu	Pro	Ser	Ser	Leu	Val	Pro	Leu	Glu	Lys	Pro	Val	Thr	Leu	Arg	Cys
						35		40			45				
Gln	Gly	Pro	Pro	Gly	Val	Asp	Leu	Tyr	Arg	Leu	Glu	Lys	Leu	Ser	Ser
						50		55			60				
Ser	Arg	Tyr	Gln	Asp	Gln	Ala	Val	Leu	Phe	Ile	Pro	Ala	Met	Lys	Arg
						65		70		75			80		
Ser	Leu	Ala	Gly	Arg	Tyr	Arg	Cys	Ser	Tyr	Gln	Asn	Gly	Ser	Leu	Trp
						85		90			95				
Ser	Leu	Pro	Ser	Asp	Gln	Leu	Glu	Leu	Val	Ala	Thr	Gly	Val	Phe	Ala
						100		105			110				
Lys	Pro	Ser	Leu	Ser	Ala	Gln	Pro	Gly	Pro	Ala	Val	Ser	Ser	Gly	Gly
						115		120			125				
Asp	Val	Thr	Leu	Gln	Cys	Gln	Thr	Arg	Tyr	Gly	Phe	Asp	Gln	Phe	Ala
						130		135			140				
Leu	Tyr	Lys	Glu	Gly	Asp	Pro	Ala	Pro	Tyr	Lys	Asn	Pro	Glu	Arg	Trp
						145		150		155			160		
Tyr	Arg	Ala	Ser	Phe	Pro	Ile	Ile	Thr	Val	Thr	Ala	Ala	His	Ser	Gly
						165		170			175				
Thr	Tyr	Arg	Cys	Tyr	Ser	Phe	Ser	Ser	Arg	Asp	Pro	Tyr	Leu	Trp	Ser
						180		185			190				
Val	Pro	Ser	Asp	Pro	Leu	Glu	Leu	Val	Val	Thr	Gly	Thr	Ser	Val	Thr
						195		200			205				
Pro	Ser	Arg	Leu	Pro	Thr	Glu	Pro	Pro	Ser	Ser	Val	Ala	Glu	Phe	Ser
						210		215			220				
Glu	Ala	Thr	Ala	Glu	Leu	Thr	Val	Ser	Phe	Thr	Asn	Lys	Val	Phe	Thr
						225		230			235			240	
Thr	Glu	Thr	Ser	Arg	Ser	Ile	Thr	Thr	Ser	Pro	Lys	Glu	Ser	Asp	Ser
						245		250			255				
Pro	Ala	Gly	Pro	Ala	Arg	Gln	Tyr	Tyr	Thr	Lys	Gly	Asn	Leu	Val	Arg
						260		265			270				

Ile Cys Leu Gly Ala Val Ile Leu Ile Leu Ala Gly Phe Leu Ala  
 275 280 285  
 Glu Asp Trp His Ser Arg Arg Lys Arg Leu Arg His Arg Gly Arg Ala  
 290 295 300  
 Val Gln Arg Pro Leu Pro Pro Leu Pro Pro Leu Pro Gln Thr Arg Lys  
 305 310 315 320  
 Ser His Gly Gly Gln Asp Gly Gly Arg Gln Asp Val His Ser Arg Gly  
 325 330 335  
 Leu Cys Ser

<210> 41  
 <211> 939  
 <212> DNA  
 <213> Mus musculus

<400> 41  
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 ctgggtcagt cagttattct gaggtgcccag ggacccctccag atgtggattt atatcgccctg 180  
 gagaaaactga aaccggagaa gtatgaagat caagacttcc tcttcattcc aaccatggaa 240  
 agaaagtaatg ttggacggta tcgatgtct tatcagaatg ggagtcaactg gtctctccca 300  
 agtgaccagc ttgagctaat tgctacaggt gtgtatgcta aaccctcact ctcagctcat 360  
 cccagctcag cagtcctca aggcaggat gtgactctga agtgcagag cccatacag 420  
 tttgatgaat tcgttctata caaagaaggg gatactgggc cttataagag acctgagaaa 480  
 tggtaccggg ccaatttccc catcatcaca gtgactgctg ctcacagtgg gacgtaccgg 540  
 tggtagct tctccagtc atctccatac ctgtggtag ccggaaatgtga ccctcttagtg 600  
 cttgtggta ctgactctc tgccactccc agccaggat ccacggaaatgatcatttcct 660  
 gtgacagaat cctccaggag accttccatc ttacccacaa aaaaaatatac tacaactgaa 720  
 aaggctatga atatcactgc ctctccagag gggctgagcc ctccaattgg ttttgctcat 780  
 cagcactatg ccaaggggaa tctggcccg atatgcctg gtgccacgat tataataatt 840  
 ttgttggggc ttctagcaga ggattggcac agtgcgaaaga aatgcctgca acacaggatg 900  
 agagcttgc aaaggccact accaccctc ccactggcc 939

<210> 42  
 <211> 313  
 <212> PRT  
 <213> Mus musculus

<400> 42  
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 Gln Val Ile Gln Thr Gln Ser Gly Pro Leu Pro Lys Pro Ser Leu Gln  
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 Ala Gln Pro Ser Ser Leu Val Pro Leu Gly Gln Ser Val Ile Leu Arg  
 35 40 45  
 Cys Gln Gly Pro Pro Asp Val Asp Leu Tyr Arg Leu Glu Lys Leu Lys  
 50 55 60  
 Pro Glu Lys Tyr Glu Asp Gln Asp Phe Leu Phe Ile Pro Thr Met Glu  
 65 70 75 80  
 Arg Ser Asn Val Gly Arg Tyr Arg Cys Ser Tyr Gln Asn Gly Ser His  
 85 90 95  
 Trp Ser Leu Pro Ser Asp Gln Leu Glu Leu Ile Ala Thr Gly Val Tyr  
 100 105 110  
 Ala Lys Pro Ser Leu Ser Ala His Pro Ser Ser Ala Val Pro Gln Gly  
 115 120 125  
 Arg Asp Val Thr Leu Lys Cys Gln Ser Pro Tyr Ser Phe Asp Glu Phe  
 130 135 140

Val Leu Tyr Lys Glu Gly Asp Thr Gly Pro Tyr Lys Arg Pro Glu Lys  
 145 150 155 160  
 Trp Tyr Arg Ala Asn Phe Pro Ile Ile Thr Val Thr Ala Ala His Ser  
 165 170 175  
 Gly Thr Tyr Arg Cys Tyr Ser Phe Ser Ser Ser Pro Tyr Leu Trp  
 180 185 190  
 Ser Ala Pro Ser Asp Pro Leu Val Leu Val Val Thr Gly Leu Ser Ala  
 195 200 205  
 Thr Pro Ser Gln Val Pro Thr Glu Glu Ser Phe Pro Val Thr Glu Ser  
 210 215 220  
 Ser Arg Arg Pro Ser Ile Leu Pro Thr Asn Lys Ile Ser Thr Thr Glu  
 225 230 235 240  
 Lys Pro Met Asn Ile Thr Ala Ser Pro Glu Gly Leu Ser Pro Pro Ile  
 245 250 255  
 Gly Phe Ala His Gln His Tyr Ala Lys Gly Asn Leu Val Arg Ile Cys  
 260 265 270  
 Leu Gly Ala Thr Ile Ile Ile Leu Leu Gly Leu Leu Ala Glu Asp  
 275 280 285  
 Trp His Ser Arg Lys Lys Cys Leu Gln His Arg Met Arg Ala Leu Gln  
 290 295 300  
 Arg Pro Leu Pro Pro Leu Pro Leu Ala  
 305 310

<210> 43  
 <211> 939  
 <212> DNA  
 <213> Mus musculus

<400> 43

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ctgggtcaagt cagttattct gaggtgcccag ggacctccag	atgtggattt atatcgccctg	180
gagaaaactga aaccggagaa gtatgaagat caagacttcc	tcttcattcc aaccatggaa	240
agaagtaatg ctggacggta tcgatgctct tattcagaatg	ggagtcaactg gtctctccca	300
agtgaccaggc tttagctaat tgctacaggt gtgtatgcta	aacccttcaact ctcagctcat	360
cccagctcag cagtcctca aggcaggat gtgactctga	agtgcagag cccatacagat	420
tttgatgaat tcgttctata caaagaaggg gatactgggc	cttataagag acctgagaaa	480
tggtacccgg tcaatttccc catcatcaca gtgactgctg	ctcacagtgg gacgtaccgg	540
tgttacagct tctccagctc atctccatac ctgtggtcag	ccccgagtga ccctctagtg	600
cttgggtta ctggactctc tgccactccc agccaggta	ccacggaaaga atcatttcct	660
gtgacagaat cttccaggag accttccatc ttacccacaa	acaaaatatac tacaactgaa	720
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cagcactatg ccaagggaa tctggcccg atatgccttg	gtgccacgat tataataatt	840
ttgttggggc ttctagcaga ggattggcac agtcggaaga	aatgcctgca acacaggatg	900
agagcttgc aaaggccact accaccctc ccactggcc		939

<210> 44

<211> 313

<212> PRT

<213> Mus musculus

<400> 44

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Gln Val Ile Gln Thr Gln Ser Gly Pro Leu Pro Lys Pro Ser Leu Gln		
20 25 30		
Ala Gln Pro Ser Ser Leu Val Pro Leu Gly Gln Ser Val Ile Leu Arg		
35 40 45		

Cys Gln Gly Pro Pro Asp Val Asp Leu Tyr Arg Leu Glu Lys Leu Lys  
     50                     55                     60  
 Pro Glu Lys Tyr Glu Asp Gln Asp Phe Leu Phe Ile Pro Thr Met Glu  
     65                     70                     75                     80  
 Arg Ser Asn Ala Gly Arg Tyr Arg Cys Ser Tyr Gln Asn Gly Ser His  
     85                     90                     95  
 Trp Ser Leu Pro Ser Asp Gln Leu Glu Leu Ile Ala Thr Gly Val Tyr  
     100                   105                     110  
 Ala Lys Pro Ser Leu Ser Ala His Pro Ser Ser Ala Val Pro Gln Gly  
     115                   120                     125  
 Arg Asp Val Thr Leu Lys Cys Gln Ser Pro Tyr Ser Phe Asp Glu Phe  
     130                   135                     140  
 Val Leu Tyr Lys Glu Gly Asp Thr Gly Pro Tyr Lys Arg Pro Glu Lys  
     145                   150                     155                     160  
 Trp Tyr Arg Val Asn Phe Pro Ile Ile Thr Val Thr Ala Ala His Ser  
     165                   170                     175  
 Gly Thr Tyr Arg Cys Tyr Ser Phe Ser Ser Ser Pro Tyr Leu Trp  
     180                   185                     190  
 Ser Ala Pro Ser Asp Pro Leu Val Leu Val Val Thr Gly Leu Ser Ala  
     195                   200                     205  
 Thr Pro Ser Gln Val Pro Thr Glu Glu Ser Phe Pro Val Thr Glu Ser  
     210                   215                     220  
 Ser Arg Arg Pro Ser Ile Leu Pro Thr Asn Lys Ile Ser Thr Thr Glu  
     225                   230                     235                     240  
 Lys Pro Met Asn Ile Thr Ala Ser Pro Glu Gly Leu Ser Pro Pro Ile  
     245                   250                     255  
 Gly Phe Ala His Gln His Tyr Ala Lys Gly Asn Leu Val Arg Ile Cys  
     260                   265                     270  
 Leu Gly Ala Thr Ile Ile Ile Leu Leu Gly Leu Leu Ala Glu Asp  
     275                   280                     285  
 Trp His Ser Arg Lys Lys Cys Leu Gln His Arg Met Arg Ala Leu Gln  
     290                   295                     300  
 Arg Pro Leu Pro Pro Leu Pro Leu Ala  
     305                   310

<210> 45  
 <211> 939  
 <212> DNA  
 <213> Mus musculus

<400> 45

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ctgggtcagt	cagttattct	gagggtccag	ggacctccag	atgtggattt	atatgccttg	180
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agaagtaatg	ctggacggta	tcgatgctct	tatcagaatg	ggagtcaactg	gtctctccca	300
agtgaccagc	tttagctaat	tgctacaggt	gtgtatgcta	aaccctca	ctcagctcat	360
cccgagctcag	cagccccctca	aggcagggtat	gtgactctga	agtgccagag	cccatcagat	420
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tggtagccgg	ccaatttccc	catcatcaca	gtgactgctg	ctcacagtgg	gacgtaccgg	540
tgttacagct	tctccagctc	atctccatac	ctgtggtag	ccccgagtga	ccctcttagtg	600
cttgggttta	ctggactctc	tgccactccc	agccaggat	ccacggaaaga	atcatttcct	660
gtgacagaat	cctccaggag	accttccatc	ttaccccacaa	acaaaatatc	tacaactgaa	720
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cagcactatg	ccaaaggggaa	tctggccgg	atatgccttg	gtgccacgat	tataataatt	840
tttgtggggc	ttctagcaga	ggattggcac	agtccgaaga	aatgcctgca	acacaggatg	900
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<210> 46  
<211> 313  
<212> PRT  
<213> Mus musculus

<400> 46  
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Ala Gln Pro Ser Ser Leu Val Pro Leu Gly Gln Ser Val Ile Leu Arg  
35 40 45  
Cys Gln Gly Pro Pro Asp Val Asp Leu Tyr Arg Leu Glu Lys Leu Lys  
50 55 60  
Pro Glu Lys Tyr Glu Asp Gln Asp Phe Leu Phe Ile Pro Thr Met Glu  
65 70 75 80  
Arg Ser Asn Ala Gly Arg Tyr Arg Cys Ser Tyr Gln Asn Gly Ser His  
85 90 95  
Trp Ser Leu Pro Ser Asp Gln Leu Glu Leu Ile Ala Thr Gly Val Tyr  
100 105 110  
Ala Lys Pro Ser Leu Ser Ala His Pro Ser Ser Ala Ala Pro Gln Gly  
115 120 125  
Arg Asp Val Thr Leu Lys Cys Gln Ser Pro Tyr Ser Phe Asp Glu Phe  
130 135 140  
Val Leu Tyr Lys Glu Gly Asp Thr Gly Pro Tyr Lys Arg Pro Glu Lys  
145 150 155 160  
Trp Tyr Arg Ala Asn Phe Pro Ile Ile Thr Val Thr Ala Ala His Ser  
165 170 175  
Gly Thr Tyr Arg Cys Tyr Ser Phe Ser Ser Ser Pro Tyr Leu Trp  
180 185 190  
Ser Ala Pro Ser Asp Pro Leu Val Leu Val Val Thr Gly Leu Ser Ala  
195 200 205  
Thr Pro Ser Gln Val Pro Thr Glu Glu Ser Phe Pro Val Thr Glu Ser  
210 215 220  
Ser Arg Arg Pro Ser Ile Leu Pro Thr Asn Lys Ile Ser Thr Thr Glu  
225 230 235 240  
Lys Pro Met Asn Ile Thr Ala Ser Pro Glu Gly Leu Ser Pro Pro Ile  
245 250 255  
Gly Phe Ala His Gln His Tyr Ala Lys Gly Asn Leu Val Arg Ile Cys  
260 265 270  
Leu Gly Ala Thr Ile Ile Ile Leu Leu Gly Leu Leu Ala Glu Asp  
275 280 285  
Trp His Ser Arg Lys Lys Cys Leu Gln His Arg Met Arg Ala Leu Gln  
290 295 300  
Arg Pro Leu Pro Pro Leu Pro Leu Ala  
305 310

<210> 47  
<211> 939  
<212> DNA  
<213> Mus musculus

<400> 47

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ctgggtcagt	cagttattct	gaggtgccag	ggacacctccag	atgtggattt	atatgcctg	180
gagaaaactga	aaccggagaa	gtatgaagat	caagacttcc	tcttcattcc	aaccatggaa	240
agaagtaatg	ctggacggta	tcgatgctct	tatcagaatg	ggagtcactg	gtctctccca	300

agtgaccagc ttgagctaat tgctacaggt gtgtatgcta aaccctcaact ctcagctcat	360
cccagctcg cagtccctca aggcaggat gtgactctga agtgcagag cccatacagt	420
tttgatgaat tcgttctata caaagaagg gatactggc cttataagag acctgagaaa	480
tggtaccggg ccaatttccc catcatcaca gtgactgtg ctcacagtgg gacgtaccgg	540
tgttacagct tctccagctc atctccatac ctgtggtcag ccccagtgaa ccctcttagtg	600
cttgtggta ctggactctc tgccactccc agccaggtac ccacggaga atcatttct	660
gtgacagaat cctccaggag accttccatc ttacccacaa aaaaaatatac tacaactgaa	720
aaggctatga atatcactgc ctctccagag gggctgagcc ctccaattgg tttgctcat	780
cagcactatg tcaagggaa tctggtcgg atatgccttg gtgccacgat tataataatt	840
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agagcttgc aaaggccact accaccctc ccactggcc	939

<210> 48  
 <211> 313  
 <212> PRT  
 <213> Mus musculus

<400> 48	
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Ala Gln Pro Ser Ser Leu Val Pro Leu Gly Gln Ser Val Ile Leu Arg	
35 40 45	
Cys Gln Gly Pro Pro Asp Val Asp Leu Tyr Arg Leu Glu Lys Leu Lys	
50 55 60	
Pro Glu Lys Tyr Glu Asp Gln Asp Phe Leu Phe Ile Pro Thr Met Glu	
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Gly Thr Tyr Arg Cys Tyr Ser Phe Ser Ser Ser Pro Tyr Leu Trp	
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